Part 3: The Second Pillar – Supervisory Review Process

677. This section discusses the key principles of supervisory review, risk management guidance and supervisory transparency and accountability produced by the Committee with respect to banking risks, including that relating to the treatment of interest rate risk in the banking book, operational risk and aspects of credit risk (stress testing, definition of default, residual risk, credit concentration risk and securitisation).

A. Importance of Supervisory Review

678. The supervisory review process of the New Accord is intended not only to ensure that banks have adequate capital to support all the risks in their business, but also to encourage banks to develop and use better risk management techniques in monitoring and managing their risks.

679. The supervisory review process recognises the responsibility of bank management in developing an internal capital assessment process and setting capital targets that are commensurate with the bank's risk profile and control environment. In the New Accord, bank management continues to bear responsibility for ensuring that the bank has adequate capital to support its risks beyond the core minimum requirements.

680. Supervisors are expected to evaluate how well banks are assessing their capital needs relative to their risks and to intervene, where appropriate. This interaction is intended to foster an active dialogue between banks and supervisors such that when deficiencies are identified, prompt and decisive action can be taken to reduce risk or restore capital. Accordingly, supervisors may wish to adopt an approach to focus more intensely on those banks whose risk profile or operational experience warrants such attention.

681. The Committee recognises the relationship that exists between the amount of capital held by the bank against its risks and the strength and effectiveness of the bank's risk management and internal control processes. However, increased capital should not be viewed as the only option for addressing increased risks confronting the bank. Other means for addressing risk, such as strengthening risk management, applying internal limits, strengthening the level of provisions and reserves, and improving internal controls, must also be considered. Furthermore, capital should not be regarded as a substitute for addressing fundamentally inadequate control or risk management processes.

682. There are three main areas that might be particularly suited to treatment under Pillar 2: risks considered under Pillar 1 that are not fully captured by the Pillar 1 process (e.g. credit concentration risk); those factors not taken into account by the Pillar 1 process (e.g. interest rate risk in the banking book, business and strategic risk); and factors external to the bank (e.g. business cycle effects). A further important aspect of Pillar 2 is the assessment of compliance with the minimum standards and disclosure requirements of the more advanced methods in Pillar 1, in particular the IRB framework for credit risk and the Advanced Measurement Approaches (AMA) for operational risk. Supervisors must ensure that these requirements are being met, both as qualifying criteria and on a continuing basis.

B. Four Key Principles of Supervisory Review

683. The Committee has identified four key principles of supervisory review, which complement those outlined in the extensive supervisory guidance that has been developed by the Committee, the keystone of which is the Core Principles for Effective Banking Supervision and the Core Principles Methodology[100]. A list of the specific guidance relating to the management of banking risks is provided at the end of this Part of the paper.

Principle 1: Banks should have a process for assessing their overall capital adequacy in relation to their risk profile and a strategy for maintaining their capital levels.

684. Banks must be able to demonstrate that chosen internal capital targets are well founded and these targets are consistent with their overall risk profile and current operating environment. In assessing capital adequacy, bank management needs to be mindful of the particular stage of the business cycle in which the bank is operating. Rigorous, forward-looking stress testing that identifies possible events or changes in market conditions that could adversely impact the bank should be performed. Bank management clearly bears primary responsibility for ensuring that the bank has adequate capital to support its risks.

685. The five main features of a rigorous process are as follows:

- board and senior management oversight;
- sound capital assessment;
- comprehensive assessment of risks;
- monitoring and reporting; and
- internal control review.

Board and senior management oversight[101]

686. A sound risk management process is the foundation for an effective assessment of the adequacy of banks' capital positions. Bank management is responsible for understanding the nature and level of risk being taken by the bank and how these risks relate to adequate capital levels. It is also responsible for ensuring that the formality and sophistication of the risk management processes are appropriate in light of the risk profile and business plan.

687. The analysis of banks' current and future capital requirements in relation to strategic objectives is a vital element of the strategic planning process. The strategic plan should clearly outline the bank's capital needs, anticipated capital expenditures, desirable capital

[100] *Core Principles for Effective Banking Supervision,* Basel Committee on Banking Supervision (September 1997), and *Core Principles Methodology,* Basel Committee on Banking Supervision (October 1999).

[101] This section of the paper refers to a management structure composed of a board of directors and senior management. The Committee is aware that there are significant differences in legislative and regulatory frameworks across countries as regards the functions of the board of directors and senior management. In some countries, the board has the main, if not exclusive, function of supervising the executive body (senior management, general management) so as to ensure that the latter fulfils its tasks. For this reason, in some cases, it is known as a supervisory board. This means that the board has no executive functions. In other countries, by contrast, the board has a broader competence in that it lays down the general framework for the management of the bank. Owing to these differences, the notions of the board of directors and senior management are used in this section not to identify legal constructs but rather to label two decision-making functions within a bank.

level, and external capital sources. Senior management and the board should view capital planning as a crucial element in being able to achieve its desired strategic objectives.

688. The bank's board of directors has responsibility for setting the bank's tolerance for risks. It should also ensure that management establishes a framework for assessing the various risks, develops a system to relate risk to the bank's capital level, and establishes a method for monitoring compliance with internal policies. It is likewise important that the board of directors adopts and supports strong internal controls and written policies and procedures and ensures that management effectively communicates these throughout the organisation.

Sound capital assessment

689. Fundamental elements of sound capital assessment include:

- policies and procedures designed to ensure that the bank identifies, measures, and reports all material risks;
- a process that relates capital to the level of risk;
- a process that states capital adequacy goals with respect to risk, taking account of the bank's strategic focus and business plan; and
- a process of internal controls, reviews and audit to ensure the integrity of the overall management process.

Comprehensive assessment of risks

690. All material risks faced by the bank should be addressed in the capital assessment process. While it is recognised that not all risks can be measured precisely, a process should be developed to estimate risks. Therefore, the following risk exposures, which by no means constitute a comprehensive list of *all* risks, should be considered.

691. ***Credit risk***: Banks should have methodologies that enable them to assess the credit risk involved in exposures to individual borrowers or counterparties as well as at the portfolio level. For more sophisticated banks, the credit review assessment of capital adequacy, at a minimum, should cover four areas: risk rating systems, portfolio analysis/aggregation, securitisation/complex credit derivatives, and large exposures and risk concentrations.

692. Internal risk ratings are an important tool in monitoring credit risk. Internal risk ratings should be adequate to support the identification and measurement of risk from all credit exposures, and should be integrated into an institution's overall analysis of credit risk and capital adequacy. The ratings system should provide detailed ratings for all assets, not only for criticised or problem assets. Loan loss reserves should be included in the credit risk assessment for capital adequacy.

693. The analysis of credit risk should adequately identify any weaknesses at the portfolio level, including any concentrations of risk. It should also adequately take into consideration the risks involved in managing credit concentrations and other portfolio issues through such mechanisms as securitisation programmes and complex credit derivatives. Further, the analysis of counterparty credit risk should include consideration of public evaluation of the supervisor's compliance with the Core Principles of Effective Banking Supervision.

694. ***Operational risk:*** The Committee believes that similar rigour should be applied to the management of operational risk, as is done for the management of other significant

banking risks. The failure to properly manage operational risk can result in a misstatement of an institution's risk/return profile and expose the institution to significant losses.

695. Banks should develop a framework for managing operational risk and evaluate the adequacy of capital given this framework. The framework should cover the bank's appetite and tolerance for operational risk, as specified through the policies for managing this risk, including the extent of, and manner in which, operational risk is transferred outside the bank. It should also include policies outlining the bank's approach to identifying, assessing, monitoring and controlling/mitigating the risk.

696. ***Market risk***: This assessment is based largely on the bank's own measure of value-at-risk or the standardised approach for market risk (see *Amendment to the Capital Accord to incorporate market risks* 1996). Emphasis should also be on the institution performing stress testing in evaluating the adequacy of capital to support the trading function.

697. ***Interest rate risk in the banking book***: The measurement process should include all material interest rate positions of the bank and consider all relevant repricing and maturity data. Such information will generally include: current balance and contractual rate of interest associated with the instruments and portfolios, principal payments, interest reset dates, maturities, and the rate index used for repricing and contractual interest rate ceilings or floors for adjustable-rate items. The system should also have well-documented assumptions and techniques.

698. Regardless of the type and level of complexity of the measurement system used, bank management should ensure the adequacy and completeness of the system. Because the quality and reliability of the measurement system is largely dependent on the quality of the data and various assumptions used in the model, management should give particular attention to these items.

699. ***Liquidity Risk:*** Liquidity is crucial to the ongoing viability of any banking organisation. Banks' capital positions can have an effect on their ability to obtain liquidity, especially in a crisis. Each bank must have adequate systems for measuring, monitoring and controlling liquidity risk. Banks should evaluate the adequacy of capital given their own liquidity profile and the liquidity of the markets in which they operate.

700. ***Other risks***: Although the Committee recognises that 'other' risks, such as reputational and strategic risk, are not easily measurable, it expects industry to further develop techniques for managing all aspects of these risks.

Monitoring and reporting

701. The bank should establish an adequate system for monitoring and reporting risk exposures and how the bank's changing risk profile affects the need for capital. The bank's senior management or board of directors should, on a regular basis, receive reports on the bank's risk profile and capital needs. These reports should allow senior management to:

- evaluate the level and trend of material risks and their effect on capital levels;
- evaluate the sensitivity and reasonableness of key assumptions used in the capital assessment measurement system;
- determine that the bank holds sufficient capital against the various risks and that they are in compliance with established capital adequacy goals; and
- assess its future capital requirements based on the bank's reported risk profile and make necessary adjustments to the bank's strategic plan accordingly.

Internal control review

702. The bank's internal control structure is essential to the capital assessment process. Effective control of the capital assessment process includes an independent review and, where appropriate, the involvement of internal or external audits. The bank's board of directors has a responsibility to ensure that management establishes a system for assessing the various risks, develops a system to relate risk to the bank's capital level, and establishes a method for monitoring compliance with internal policies. The board should regularly verify whether its system of internal controls is adequate to ensure well-ordered and prudent conduct of business.

703. The bank should conduct periodic reviews of its risk management process to ensure its integrity, accuracy, and reasonableness. Areas that should be reviewed include:

- the appropriateness of the bank's capital assessment process given the nature, scope and complexity of its activities;
- the identification of large exposures and risk concentrations;
- the accuracy and completeness of data inputs into the bank's assessment process;
- the reasonableness and validity of scenarios used in the assessment process; and
- stress testing and analysis of assumptions and inputs.

Principle 2: Supervisors should review and evaluate banks' internal capital adequacy assessments and strategies, as well as their ability to monitor and ensure their compliance with regulatory capital ratios. Supervisors should take appropriate supervisory action if they are not satisfied with the result of this process.

704. The supervisory authorities should regularly review the process by which banks assess their capital adequacy, the risk position of the bank, the resulting capital levels and quality of capital held. Supervisors should also evaluate the degree to which banks have in place a sound internal process to assess capital adequacy. The emphasis of the review should be on the quality of the bank's risk management and controls and should not result in supervisors functioning as bank management. The periodic review can involve some combination of:

- on-site examinations or inspections;
- off-site review;
- discussions with bank management;
- review of work done by external auditors (provided it is adequately focused on the necessary capital issues); and
- periodic reporting.

705. The substantial impact that errors in the methodology or assumptions of formal analyses can have on resulting capital requirements requires a detailed review by supervisors of each bank's internal analysis.

Review of adequacy of risk assessment

706. Supervisors should assess the degree to which internal targets and processes incorporate the full range of material risks faced by the bank. Supervisors should also review the adequacy of risk measures used in assessing internal capital adequacy and the extent to which these risk measures are also used operationally in setting limits, evaluating business

line performance and evaluating and controlling risks more generally. Supervisors should consider the results of sensitivity analyses and stress tests conducted by the institution and how these results relate to capital plans.

Assessment of capital adequacy

707. Supervisors should review the bank's processes to determine:

- that the target levels of capital chosen are comprehensive and relevant to the current operating environment;
- that these levels are properly monitored and reviewed by senior management; and
- that the composition of capital is appropriate for the nature and scale of the bank's business.

708. Supervisors should also consider the extent to which the bank has provided for unexpected events in setting its capital levels. This analysis should cover a wide range of external conditions and scenarios, and the sophistication of techniques and stress tests used should be commensurate with the bank's activities.

Assessment of the control environment

709. Supervisors should consider the quality of the bank's management information reporting and systems, the manner in which business risks and activities are aggregated, and management's record in responding to emerging or changing risks.

710. In all instances, the capital levels at individual banks should be determined according to the bank's risk profile and adequacy of its risk management process and internal controls. External factors such as business cycle effects and the macroeconomic environment should also be considered.

Supervisory review of compliance with minimum standards

711. In order for certain internal methodologies, CRM techniques and asset securitisations to be recognised for regulatory capital purposes, banks will need to meet a number of requirements, including risk management standards and disclosure. In particular, banks will be required to disclose features of their internal methodologies used in calculating minimum capital requirements. As part of the supervisory review process, supervisors must ensure that these conditions are being met on an ongoing basis.

712. The Committee regards this review of minimum standards and qualifying criteria as an integral part of the supervisory review process under Principle 2. In setting the minimum criteria the Committee has considered current industry practice and so anticipates that these minimum standards will provide supervisors with a useful set of benchmarks that are aligned with bank management expectations for effective risk management and capital allocation.

713. There is also an important role for supervisory review of compliance with certain conditions and requirements set for standardised approaches. In this context, there will be a particular need to ensure that use of various instruments that can reduce Pillar 1 capital requirements are utilised and understood as part of a sound, tested, and properly documented risk management process.

Supervisory response

714. Having carried out the review process described above, supervisors should take appropriate action if they are not satisfied with the results of the bank's own risk assessment and capital allocation. Supervisors should consider a range of actions, such as those set out under Principles 3 and 4 below.

Principle 3: Supervisors should expect banks to operate above the minimum regulatory capital ratios and should have the ability to require banks to hold capital in excess of the minimum.

715. Pillar 1 capital requirements will include a buffer for uncertainties surrounding the Pillar 1 regime that affect the banking population as a whole. Bank-specific uncertainties will be treated under Pillar 2. It is anticipated that such buffers under Pillar 1 will be set to provide reasonable assurance that banks with good internal systems and controls, a well-diversified risk profile and a business profile well covered by the Pillar 1 regime, and who operate with capital equal to Pillar 1 requirements will meet the minimum goals for soundness embodied in Pillar 1. However, supervisors will need to consider whether the particular features of the markets for which they are responsible are adequately covered. Supervisors will typically require (or encourage) banks to operate with a buffer, over and above the Pillar 1 standard. Banks should maintain this buffer for a combination of the following:

(a) Pillar 1 minimums are anticipated to be set to achieve a level of bank creditworthiness in markets that is below the level of creditworthiness sought by many banks for their own reasons. For example, most international banks appear to prefer to be highly rated by internationally recognised rating agencies. Thus, banks are likely to choose to operate above Pillar 1 minimums for competitive reasons.

(b) In the normal course of business, the type and volume of activities will change, as will the different risk requirements, causing fluctuations in the overall capital ratio.

(c) It may be costly for banks to raise additional capital, especially if this needs to be done quickly or at a time when market conditions are unfavourable.

(d) For banks to fall below minimum regulatory capital requirements is a serious matter. It may place banks in breach of the relevant law and/or prompt non-discretionary corrective action on the part of supervisors.

(e) There may be risks, either specific to individual banks, or more generally to an economy at large, that are not taken into account in Pillar 1.

716. There are several means available to supervisors for ensuring that individual banks are operating with adequate levels of capital. Among other methods, the supervisor may set trigger and target capital ratios or define categories above minimum ratios (e.g. well capitalised and adequately capitalised) for identifying the capitalisation level of the bank.

Principle 4: Supervisors should seek to intervene at an early stage to prevent capital from falling below the minimum levels required to support the risk characteristics of a particular bank and should require rapid remedial action if capital is not maintained or restored.

717. Supervisors should consider a range of options if they become concerned that banks are not meeting the requirements embodied in the supervisory principles outlined above. These actions may include intensifying the monitoring of the bank; restricting the payment of dividends; requiring the bank to prepare and implement a satisfactory capital adequacy restoration plan; and requiring the bank to raise additional capital immediately.

Supervisors should have the discretion to use the tools best suited to the circumstances of the bank and its operating environment.

718. The permanent solution to banks' difficulties is not always increased capital. However, some of the required measures (such as improving systems and controls) may take a period of time to implement. Therefore, increased capital might be used as an interim measure while permanent measures to improve the bank's position are being put in place. Once these permanent measures have been put in place and have been seen by supervisors to be effective, the interim increase in capital requirements can be removed.

C. Specific issues to be addressed under the supervisory review process

719. The Committee has identified a number of important issues that banks and supervisors should particularly focus on when carrying out the supervisory review process. These issues include some key risks which are not directly addressed under Pillar 1 and important assessments that supervisors should make to ensure the proper functioning of certain aspects of Pillar 1.

Interest rate risk in the banking book

720. The Committee remains convinced that interest rate risk in the banking book is a potentially significant risk which merits support from capital. However, comments received from the industry and additional work conducted by the Committee have made it clear that there is considerable heterogeneity between internationally active banks in terms of the nature of the underlying risk and the processes for monitoring and managing it. In light of this, the Committee has concluded that it is at this time most appropriate to treat interest rate risk in the banking book under the Pillar 2 of the new framework. Nevertheless, supervisors who consider that there is sufficient homogeneity within their banking populations regarding the nature and methods for monitoring and measuring this risk could establish a mandatory minimum capital requirement.

721. The revised guidance on interest rate risk recognises banks' internal systems as the principal tool for the measurement of interest rate risk in the banking book and the supervisory response. To facilitate supervisors' monitoring of interest rate risk exposures across institutions, banks would have to provide the results of their internal measurement systems, expressed in terms of economic value relative to capital, using a standardised interest rate shock.

722. If supervisors determine that banks are not holding capital commensurate with the level of interest rate risk, they must require the bank to reduce its risk, to hold a specific additional amount of capital or some combination of the two. Supervisors should be particularly attentive to the sufficiency of capital of 'outlier banks' where economic value declines by more than 20% of the sum of Tier 1 and Tier 2 capital as a result of a standardised interest rate shock (200 basis points) or its equivalent, as described in the supporting document *Principles for the Management and Supervision of Interest Rate Risk*.

Operational risk

723. Gross income, used in the Basic Indicator and Standardised Approaches for operational risk, is only a proxy for the scale of operational risk exposure of a bank and can

in some cases, e.g. for banks with low margins or profitability, underestimate the need of capital for operational risk. With reference to the supporting document *Sound Practices for the Management and Supervision of Operational risk,* the supervisor should consider whether the capital requirement generated by the Pillar 1 calculation gives a consistent picture of the individual bank's operational risk exposure, for example in comparison with other banks of similar size and with similar operations.

Credit risk

Stress tests under the IRB

724. A bank should ensure that it has sufficient capital to meet the Pillar 1 requirements and the results (where a deficiency has been indicated) of the credit risk stress test performed as part of the Pillar 1 IRB minimum requirements (paragraphs 396 to 399). Supervisors may wish to review how the stress test has been carried out. The results of the stress test will thus contribute directly to the expectation that a bank will operate above the Pillar 1 minimum regulatory capital ratios. Supervisors will consider whether a bank has sufficient capital for these purposes. To the extent that there is a shortfall, the supervisor will react appropriately. This will usually involve requiring the bank to reduce its risks and/or to hold additional capital/provisions, so that existing capital resources could cover the Pillar 1 requirements plus the result of a recalculated stress test.

Definition of default

725. Banks must use the reference definition of default for their internal estimations of PD and / or LGD and EAD. However, as detailed in paragraph 416, national supervisors will issue guidance on how the reference definition of default is to be interpreted in their jurisdiction. Supervisors will assess the individual banks' application of the reference definition of default and its impact on capital requirements. In particular, supervisors will focus on the impact of deviations from the reference definition according to paragraph 418 (use of external data or historic internal data not fully consistent with the reference definition of default).

Residual risk

726. The New Accord allows banks to offset credit or counterparty risk with collateral, guarantees or credit derivatives leading to reduced capital charges. While banks use CRM techniques to reduce their credit risk, these techniques give rise to risks that may render the overall risk reduction less effective. Accordingly these risks, such as legal risk, documentation risk or liquidity risk, to which banks are exposed are of supervisory concern. In that case, and irrespective of fulfilling the minimum requirements set out in Pillar 1, the bank could find itself with greater credit risk exposure to the underlying counterparty than it had expected. Examples of these risks include:

- inability to seize, or realise in a timely manner, collateral pledged (on default of the counterparty);
- refusal or delay by a guarantor to pay; and
- ineffectiveness of untested documentation.

727. Therefore, supervisors will require banks to have in place appropriate written CRM policies and procedures in order to control these residual risks. A bank may be required to submit these policies and procedures to supervisors and must regularly review their appropriateness, effectiveness and operation.

728. In its CRM policies and procedures, a bank must consider whether, when calculating capital requirements, it is appropriate to give the full recognition of the value of the credit risk mitigant as permitted in Pillar 1 and must demonstrate that its CRM management policies and procedures are appropriate to the level of capital benefit that it is recognising. Where supervisors are not satisfied as to the robustness, suitability or application of these policies and procedures they may direct the bank to take immediate remedial action or hold additional capital against residual risk until such time as the deficiencies in the CRM procedures are rectified to the satisfaction of the supervisor. For example, supervisors may direct a bank to:

- make adjustments to the assumptions on holding periods, supervisory haircuts or volatility (in the own haircuts approach);
- give less than full recognition of credit risk mitigants (on the whole credit portfolio or by specific product line); and/or
- hold a specific additional amount of capital.

Credit concentration risk

729. A risk concentration is any single exposure or group of exposures with the potential to produce losses large enough (relative to a bank's capital, total assets or its overall risk level) to threaten a bank's health or ability to maintain its core operations. Risk concentrations are arguably the single most important cause of major problems in banks.

730. Risk concentrations can arise in a bank's assets, liabilities, or off-balance sheet items, through the execution or processing of transactions (either product or service), or through a combination of exposures across these broad categories. Because lending is the primary activity of most banks, credit risk concentrations are often the most material risk concentrations within a bank.

731. Credit risk concentrations, by their nature, are based on common or correlated risk factors, which, in times of stress, have an adverse effect on the creditworthiness of each of the individual counterparties making up the concentration. Such concentrations are not addressed in the Pillar 1 capital charge for credit risk.

732. Banks should have in place effective internal policies, systems and controls to identify, measure, monitor, and control their credit risk concentrations. Banks should explicitly consider the extent of their credit risk concentrations in their assessment of capital adequacy under Pillar 2. These policies should cover the different forms of credit risk concentrations to which a bank may be exposed. Such concentrations include:

- significant exposures to an individual counterparty or group of related counterparties. In many jurisdictions, supervisors define a limit for exposures of this nature, commonly referred to as a large exposure limit. Banks might also establish an aggregate limit for the management and control of all of its large exposures as a group;
- credit exposures to counterparties in the same economic sector or geographic region;
- credit exposures to counterparties whose financial performance is dependent on the same activity or commodity; and
- indirect credit exposures arising from a bank's CRM activities (e.g. exposure to a single collateral type or to credit protection provided by a single counterparty).

733. A bank's framework for managing credit risk concentrations should be clearly documented and should include a definition of the credit risk concentrations relevant to the bank and how they and their corresponding limits are calculated. Limits should be defined in relation to a bank's capital, total assets or, where adequate measures exist, its overall risk level.

734. A bank's management should conduct periodic stress tests of its major credit risk concentrations and review the results of those tests to identify and respond to potential changes in market conditions that could adversely impact the bank's performance.

735. A bank should ensure that, in respect of credit risk concentrations, it complies with the Committee document *Principles for the management of credit risk*, September 2000 and the more detailed guidance in the Appendix to that paper.

736. In the course of their activities, supervisors should assess the extent of a bank's credit risk concentrations, how they are managed, and the extent to which the bank considers them in its internal assessment of capital adequacy under Pillar 2. Such assessments should include reviews of the results of a bank's stress tests. Supervisors should take appropriate actions where the risks arising from a bank's credit risk concentrations are not adequately addressed by the bank.

Securitisation

737. Further to the Pillar 1 principle that banks should take account of the economic substance of transactions in their determination of adequate capital, supervisory authorities will monitor, as appropriate, whether banks have done so adequately. As a result, regulatory capital treatments for specific securitisation exposures may exceed those specified in Pillar 1 of the New Accord, particularly in instances where the general capital requirement would not adequately and sufficiently reflect the risks to which an individual banking organisation is exposed.

738. Amongst other things, supervisory authorities may review where relevant a bank's own assessment of its capital needs and how that has been reflected in the capital calculation as well as the documentation of certain transactions to determine whether the capital requirements accord with the risk profile (e.g. substitution clauses). Supervisors will also review the manner in which banks have addressed the issue of maturity mismatch in relation to retained positions in their economic capital calculations. In particular, they will be vigilant in monitoring for the structuring of maturity mismatches in transactions to artificially reduce capital requirements. Additionally supervisors may review the bank's assessment of actual correlation between assets in the pool and how they have reflected that in the calculation. Where supervisors consider that a bank's approach is not adequate, they will take appropriate action. Such action might include denying or reducing capital relief in the case of originated assets, or increasing the capital required against securitisation exposures acquired.

Significance of risk transfer

739. Securitisation transactions may be carried out for purposes other than credit risk transfer (e.g. funding). Where this is the case, there may still be a limited transfer of credit risk. However, for an originating bank to achieve reductions in capital requirements, the risk transfer arising from a securitisation has to be deemed significant by the national supervisor. If the risk transfer is considered to be insufficient or non existent, the supervisor can require the application of a higher capital requirement than prescribed under Pillar 1 or, alternatively, may deny a bank from obtaining any capital relief from the securitisations. Accordingly, the supervisory expectation is that, in order to achieve some capital relief, an originator is

expected to have transferred some risk to third parties. Therefore, the capital relief that can be achieved will correspond to the amount of credit risk that is effectively transferred. The following includes a set of examples where supervisors may have concerns about the degree of risk transferred, such as retaining or repurchasing significant amounts of risk or "cherry picking" the exposures to be transferred via a securitisation.

740. Retaining or repurchasing significant securitisation exposures, depending on the proportion of risk held by the originator, might undermine the intent of a securitisation to transfer credit risk. Specifically, supervisory authorities might expect that a significant portion of the credit risk and of the nominal value of the pool be transferred to at least one independent third party at inception and on an ongoing basis. Where banks repurchase risk for market making purposes, supervisors could find it appropriate for an originator to buy part of a transaction but not, for example, to repurchase a whole tranche. Supervisors would expect that where positions have been bought for market making purposes, these positions be resold within an appropriate period, therefore remaining true to the initial intention to transfer risk.

741. Another implication of realising only a non-significant risk transfer, especially if related to good quality unrated exposures, is that both the poorer quality unrated assets and most of the credit risk embedded in the exposures underlying the securitised transaction are likely to remain with the originator. Accordingly, and depending on the outcome of the supervisory review process, the supervisor may increase the capital requirement for particular exposures or even increase the overall level of capital the bank is required to hold.

Market innovations

742. As the minimum capital requirements for securitisation may not be able to address all potential issues, supervisory authorities are expected to consider new features of securitisation transactions as they arise. Such assessments would include reviewing the impact new features may have on credit risk transfer and, where appropriate, supervisors will be expected to take suitable action under Pillar 2. A Pillar 1 response may be formulated to take account of market innovations. Such a response may take the form of a set of operational requirements and/or a specific capital treatment.

Provision of implicit support

743. Support to a transaction, whether contractual (i.e. credit enhancements provided at the inception of a securitised transaction) or non-contractual (implicit support) can take numerous forms. For instance, contractual support can include over collateralisation, credit derivatives, spread accounts, contractual recourse obligations, subordinated notes, credit risk mitigants provided to a specific tranche, the subordination of fee or interest income or the deferral of margin income and clean-up calls that exceed 10 percent of the initial issuance. Examples of implicit support include the purchase of deteriorating credit risk exposures from the underlying pool, the sale of discounted credit risk exposures into the pool of securitised credit risk exposures, the purchase of securitisation at above market price and the substitution or replenishment of assets that systematically improve the quality of the securitised pool.

744. The provision of implicit (or non-contractual) support, as opposed to contractual credit support (i.e. credit enhancements) raises significant supervisory concerns. For traditional securitisation structures the provision of implicit support undermines the clean break criteria, which when satisfied would allow banks to exclude the securitised assets from regulatory capital calculations. For synthetic securitisation structures, it negates the significance of risk transference. By providing implicit recourse banks signal to the market that the risk is still on the bank's books and has not in effect been transferred. The

institution's capital calculation therefore understates the true risk. Accordingly, national supervisors are expected to take appropriate action when a banking organisation provides implicit support.

745. When a bank has been found to provide implicit support to a securitisation, it will be required to hold capital against all of the underlying exposures associated with the structure as if they had not been securitised. It will also be required to disclose publicly that it was found to have provided non-contractual support and the consequences (as noted above). The aim is to require banks to hold capital against exposures for which they assume the credit risk, and to discourage them from providing non-contractual support.

746. However, if a bank is found to have provided implicit support on more than one occasion, the bank will be required to disclose its transgression publicly and national supervisors will take appropriate action. The supervisory action may include, but is not limited to, one or more of the following:

- The bank may be prevented from gaining favourable capital treatment on securitised assets for a period of time to be determined by the national supervisor;
- The bank may be required to hold capital against all securitised assets as though the bank had created a commitment to them, by applying a conversion factor to the risk weight of the underlying assets;
- For purposes of capital calculations, the bank may be required to treat all securitised assets as if they remained on the balance sheet;
- The bank may be required by its national supervisor to disclose its provision of implicit support and/or to hold regulatory capital in excess of the minimum risk-based capital ratios.

747. Supervisors will be vigilant in determining implicit support and will take appropriate supervisory action to mitigate the effects. Pending any investigation, the bank may be prohibited from any capital relief for planned securitisation transactions (moratorium). National supervisory response will be aimed at changing the bank's behaviour with regard to the provision of implicit support, and to correct market perception as to the willingness of the bank to provide future recourse beyond contractual obligations.

Residual risks

748. As with CRM techniques more generally, supervisors will review the appropriateness of banks' approaches to the recognition of credit protection. In particular, with regard to securitisations, supervisors will review the appropriateness of protection recognised against first loss credit enhancements. On these positions, expected loss is less likely to be a significant element of the risk and is likely to be retained by the protection buyer through the pricing. Therefore, supervisors will expect banks' policies to take account of this in determining their economic capital. Where supervisors do not consider the approach to protection recognised is adequate, they will take appropriate action. Such action may include increasing the capital requirement against a particular transaction or class of transactions.

Call provisions

749. Supervisors expect banks not to make use of clauses that entitle them to call the securitisation transaction or the coverage of credit protection prematurely if this would result in the bank having to account for losses or deterioration in the credit quality of the underlying exposures.

750. Besides the general principle stated above, supervisors expect banks to only execute clean-up calls for economic business purposes, such as when the cost of servicing the outstanding credit exposures exceeds the benefits of servicing the underlying credit exposures.

751. Time calls in securitisation transactions would not constitute a maturity mismatch when they are not associated with any explicit incentive to terminate the transaction early. When intending to exercise such a call in securitisation transactions, a bank would be expected to give prior notification to its supervisor. Subject to national discretion, supervisory authorities may conduct a review prior to the bank exercising the call which can be expected to include consideration of:

- The fact that, to the bank's best knowledge, the exercise of such a clause would not imply the calling bank having to account for losses on the securitised exposures;
- An explanation of the rationale underpinning the bank's decision to exercise the time call;
- A statement regarding the impact of the exercise of such a clause on the bank's capital adequacy ratio.

752. The supervisor may also require the bank to enter into a follow-up transaction, if necessary, depending on the bank's overall risk profile, existing market conditions or the impact of exercising the call on the bank's risk profile.

753. Date related calls should be set at a date no earlier than the duration or the weighted average life of the underlying securitisation exposures. Accordingly, supervisory authorities may require a minimum period to elapse before the first possible call date can be set, given, for instance, the existence of up-front sunk cost of a capital market securitisation transaction.

Early amortisation

754. Supervisory authorities expect banks to have adequate capital and liquidity plans to address the implications of both scheduled and early amortisation. Where supervisors do not consider these adequate, they will take appropriate action. Such action may include, but is not limited to directing a bank to obtain a dedicated liquidity line or raising the early amortisation conversion factor.

755. For controlled amortisations specifically, supervisors may also review the process by which a bank determines the minimum amortisation period required to pay down 90% of the outstanding balance at the point of early amortisation. Where a supervisor does not consider this adequate it will take appropriate action, such as increasing the conversion factor associated with a particular transaction/class of transactions.

D. Other aspects of the supervisory review process

Supervisory transparency and accountability

756. The supervision of banks is not an exact science, and therefore, discretionary elements within the supervisory review process are inevitable. Supervisors must take care to carry out their obligations in a highly transparent and accountable manner. Supervisors should make publicly available the criteria to be used in the review of banks' internal capital assessments. If a supervisor chooses to set target or trigger ratios or to set categories of capital in excess of the regulatory minimum, factors that may be considered in doing so

should be publicly available. Where the capital requirements are set above the minimum for an individual bank, the supervisor should explain to the bank the risk characteristics specific to the bank which resulted in the requirement, why these risks are not adequately captured under Pillar 1, the contribution of each of the identified characteristics to the additional requirement, and any remedial action necessary.

Guidance Related to the Supervisory Review Process (Published by the Basel Committee on Banking Supervision)

1.	Part B of the Amendment to the Capital Accord to Incorporate Market Risks	January 1996, *Final*
2.	Core Principles for Effective Banking Supervision	September 1997, *Final*
3.	The Core Principles Methodology	October 1999, *Final*
4.	Risk Management Guidelines for Derivatives	July 1994, *Final*
5.	Management of Interest Rate Risk	September 1997, *Final*
6.	Risk Management for Electronic Banking	March 1998, *Final*
7.	Framework for Internal Controls	September 1998, *Final*
8.	Sound Practices for Banks' Interactions with Highly Leveraged Institutions	January 1999, *Final*
9.	Enhancing Corporate Governance	August 1999, *Final*
10.	Sound Practices for Managing Liquidity	February 2000, *Final*
11.	Principles for the Management of Credit Risk	September 2000, *Final*
12.	Supervisory Guidance for Managing Settlement Risk in Foreign Exchange Transactions	September 2000, *Final*
13.	Principles for the Management and Supervision of Interest Rate Risk	January 2001, *For Comment*
14.	Risk Management Principles for Electronic Banking	May 2001, *For Comment*
15.	Internal Audit in Banks and the Supervisor's Relationship with Auditors	August 2001, *Final*
16.	Customer Due Diligence for Banks	October 2001, *Final*
17.	The Relationship Between Banking Supervisors and Banks' External Auditors	January 2002, *Final*
18.	Supervisory Guidance for Dealing with Weak Banks	March 2002, *Final*
19.	Management and Supervision of Cross-border Electronic Banking Activities	October 2002, *For Comment*
20.	Sound Practices for the Management and Supervision of Operational Risk	February 2003, *Final*

Note: the papers are available from the BIS website (www.bis.org/publ/index.htm).